

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/536,781

Examiner: Philip Earl Stimpert

Applicant/Appellant: Nigel Paul Schofield

Art Unit: 3746

Title: VACUUM PUMPING
ARRANGEMENT

Confirmation No.: 4221

Filed: October 11, 2005

Atty. Docket No.: M02B162

Commissioner for Patents
MAIL STOP **APPEAL BRIEF - PATENTS**
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Dear Sir/Madam:

Appellant submits herewith a Reply Brief in response to Examiner's Answer of December 23, 2010, in the above-referenced matter under 37 CFR 41.41.

I. STATUS OF CLAIMS

Claims 1, 3-5, 7-11, 16, 18 and 19 are pending in the application. Claims 2, 6, 12-15, and 17 are cancelled. Claims 1, 3-5, 7-11, 16, 18 and 19 stand rejected by Examiner, and are the claims on appeal.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Whether Examiner errs in rejecting claims 1, 3-5, 7, 8, and 16 under 102(b) as being anticipated by US Patent No. 5,893,702 to Conrad et al. (hereinafter referred to as “Conrad”).
- B. Whether Examiner errs in rejecting claims 1, 3-5, 7, 8 and 16 under 35 USC 103(a) as being obvious over Conrad.
- C. Whether Examiner errs in rejecting claims 9, 18, and 19 under 35 USC 103(a) as being unpatentable over Conrad in view of US Patent No. 6,135,709 to Stones (hereinafter referred to as “Stones”).
- D. Whether Examiner errs in rejecting claim 10 under 35 USC 103(a) as being unpatentable over Conrad in view of US Patent No. 4,465,434 to Rourk (hereinafter referred to as “Rourk”).
- E. Whether Examiner errs in rejecting claim 11 under 35 USC 103(a) as being unpatentable over Conrad in view of US Patent No. 5,230,924, which Appellant believes was misplaced for No. 5,848,873, to Schofield (hereinafter referred to as “Schofield”).

III. ARGUMENT

A. There is a difference between Examiner's interpretation of "annular ring" in the Final Office Action of March 18, 2010 and that in Examiner's Answer of December 23, 2010.

On page 10, line 21 through page 11, line 16 of the Examiner's Answer, Examiner states the following:

The applicant also argues that Conrad does not suggest an interface component similar to the claimed ring. This argument is based on a misunderstanding of the examiner's position. The examiner is not proposing any annular ring beyond those of the drag pump rotors (5)... For instance, an outer one of the drag pump rotors (5) could be considered the annular ring, and one of the other rotors could be considered the claimed drag pump rotor, since they are mutually fixed to each other via the connection element 14. Or alternatively, an upper section of an individual rotor (5), either similar to the bearings (13) of Fig. 3, or an intermediate section as shown in the section of Fig. 6 shown below, may be considered the annular ring to which the operative section of the drag pump rotor is fixed by integral formation therewith.

In Examiner's Answer, Examiner appears to consider the drag pump rotor (5) of Conrad or at least part of it as the claimed annular ring.

In paragraph 5 of the Final Office Action, Examiner states "the rotor blades are provided with an annular ring (within the axial extent of the blades, or at least at their intersection with the drag pump rotors 5) to which is affixed the rotors (5) of the drag pumping mechanism." A reasonable interpretation of this sentence is that the annular ring is a separate component from the drag pump rotors, instead of an integral part thereof. In the Final Office Action, the annular ring is referred to by its own term different from "drag pump rotor." The verb "affixed" suggests an action of connecting

two separate components, instead forming an integral piece of structure. The dictionary definition of “affix” is to secure an object to another. *See, The American Heritage Dictionary by Houghton Mifflin Company, 1981.* Although Examiner might have intended to compare the claimed annular ring to the drag pump rotor or at least a portion thereof, nothing in the Final Office Action clarified these ambiguities, or at least discussed about the drag pump rotors in “sections.” Thus, Appellant respectfully submits that there is a difference between Examiner’s interpretation of “annular ring” in the Final Office Action and that in Examiner’s Answer, and that such difference constitutes a new ground of rejection.

B. Examiner’s equating the claimed annular ring to the drag pump rotor (5) of Conrad is inconsistent with the specification, and therefore inappropriate.

Appellant respectfully submits that Examiner’s equating the claimed annular ring to the drag pump rotor (5) of Conrad is inconsistent with the specification. “At approximately half way along the radial length of the rotor blades, an annular support ring 60 is provided, to which is fixed the drag cylinder, or rotor, 62 of molecular drag pumping mechanism 18, so that the rotor blades of the turbomolecular pumping mechanism support the rotor of the molecular drag pumping mechanism.” *See, the specification, page 6, lines 9-13.* It is clear from this sentence that the annular ring 60 and drag pump rotor 62 are referred to in the specification as two separate components, instead of a single, integral piece of structure. This interpretation is further supported by FIGs. 1 and 2 of the application, in which the annular ring 60 and drag pump rotor 62 are illustrated as two separate components.

During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000). Thus, Appellant respectfully submits that Examiner's equating the claimed annular ring to the drag pump rotor is inconsistent with the specification, and therefore inappropriate.

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Appellant respectfully submits that, for the reasons provided in the Reply Brief and the Appeal Brief of November 23, 2010, Examiner is incorrect in rejecting the pending claims, and has raised new grounds of rejection. Accordingly, Appellant respectfully requests that the Examiner be reversed, or the prosecution be reopened.

Respectfully submitted,

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